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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,487	11/10/2000	John Josef Hench	1340P082	5334
8791	7590	10/10/2006	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			TRAN, THIEN D	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/710,487	<b>Applicant(s)</b> HENCH ET AL.	
	<b>Examiner</b> Thien D. Tran	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,6-20,22,24-31,33 and 35-41 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1,2,4,6,8-20,22,24-31,33,35 and 37-41 is/are rejected.  
 7) ☒ Claim(s) 7 and 36 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. Applicant's request for reconsideration of the 112 rejection of the last Office action is persuasive and, therefore, the 112 rejection of that action is withdrawn.

In order for Examiner to issue an examiner answer as requested by the Applicant in the argument, The Applicant need to reinstate the appeal. See MPEP 1205.

2. Claims 1, 2, 4, 6, 8-20, 22, 24-31, 33, 35, 37-41 are rejected under 35 U.S.C. 102(e) as being participated by Gaikwad et al (U.S Patent No 6,317,495 B1).

Regarding claim 1, Gaikwad discloses a method for the determination (prediction) and optimization of a communications system comprising:

inputting data from a plurality of bins (channels) of the communications system, col.10 lines 5-15, figures 2 and 4;

determining (predicting) a performance of at least one of the plurality of channels using a plurality of parameters to characterize the performance of the channel, col.14 lines 5-10, col.59 lines 15-25;

creating at least one transfer function model of the at least one of the plurality of channels, wherein the transfer function model is simulated using physical configuration information of the communication system, col.25 lines 30-35, figure 15; and

optimizing the channel transfer function such as function of frequency, signal strength, phase shift, function of transmit spectrum...etc (parameters) of at least one of the plurality of channels in order to improve a capacity in bit rate of the at least one of

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the plurality of channels in the communications system. See col.16 lines 50-65, col.17 line 45, figures 9-14.

Regarding claims 13, Gaikwad discloses a system for the prediction and optimization of a communications system comprising:

a determination module (prediction module), wherein the determination module determines (predicts) the performance of at least one channel in the communications system by providing a characterization of at least one parameter that describes the channel, col.16 lines 45-61;

and an optimization module, wherein the optimization module finds the optimum characterization for the channel based on at least one design criteria. See figures 14, 15, 27, col.21 and 22.

Regarding claim 20, Gaikwad discloses a method for the prediction of the performance of a communications system comprising:

inputting data from at least one channel of the communication system into a prediction module (col.15 lines 10-15);

creating at least one transfer function model of the at least one channel;  
determining an impairment on the at least one channel (col.16 lines 40-60, figure 9);

characterizing the at least one channel using the at least one transfer function model and the impairment. See col.16 and 17.

Regarding claim 30, Gaikwad discloses a method for the prediction and optimization of a communications system comprising:

inputting data from at least one channel of the communications system col.18  
lines 60-67;

predicting a performance of at least one of the channels using at least one  
parameter to characterize the performance of the channel, col.28 lines 35-55; and

optimizing at least one parameter of at least one of the channels in order to  
improve a bit rate of the at least one of the channels in the communications system.  
See col.17 lines 40-55.

Regarding claims 2, 31, Gaikwad discloses the determining the performance of  
the at least one of the plurality of channels comprises:

inputting data from at least one channel of the communications system into a  
prediction module;

creating at least one transfer function model of the at least one channel, col.18  
lines 60-67;

determining an impairment on the at least one channel, col.28 lines 25-35;  
characterizing at least one channel using the at least one transfer function  
model and the impairment, figure.9

Regarding claims 4, 22, 33, Gaikwad discloses that at least one transfer function  
model is created using a spectrum management system, col.19 lines 10-25.

Regarding claims 6, 14, 24, 35, Gaikwad discloses that the impairment is  
selected from the group consisting of: a cross-talk impairment, an AM radio  
interference, a temperature impairment, and any combination thereof, col.9 lines 5-35.

Regarding claims 8, 15, 25, 37, Gaikwad discloses that the communications system is a wireline communications system, col.14 lines 50-60.

Regarding claims 9, 16, 26, 38, Gaikwad discloses that the communications system is a wireless communications system, col.14 lines 50-60.

Regarding claims 10, 17, 27, 39, Gaikwad discloses that the communications system is an optical communications system, col.14 lines 50-60.

Regarding claims 11, 18, 28, 40, Gaikwad discloses that the communications system is a cable communications system, col.14 lines 50-60.

Regarding claims 12, 19, 29, 41, Gaikwad discloses that the communications system is a DSL communications system, col.14 lines 45-60.

### ***Allowable Subject Matter***

3. Claims 7, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

4. Applicant's arguments filed the appeal brief on 12/14/2005 have been fully considered but they are not persuasive.

Applicant argues that Gaikwad does not disclose a method for creating at least one transfer function model of the at least one of the plurality of channels, wherein the transfer function model is simulated using physical configuration information of the

communication system. However, Examiner respectfully disagrees with the argument because Gaikwad discloses a method for creating at least one transfer function model of the at least one of the plurality of channels, col.25 lines 30-55, figure 15 and having criteria of NEXT, FEXT, bit rates...ect (physical configuration), col.26 lines 15-30. Moreover, Applicant agrees that Gaikwad's simulation system using the transfer function, which involves to the measurements (physical configuration), appeal brief page 10.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached on (571) 272-7629. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

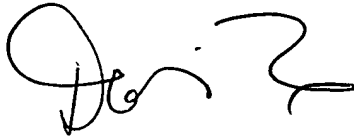
6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

Patent Examiner

Thien Tran



DORIS H. TO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600